

Comparing Foot pressure changes pre and post mobilisations

Comparing foot pressure changes of 9 sprinter athletes

5 female 4 male pre and post foot/ankle mobilisations

The scanner used is an RS scanner supplied by Mr. J Corcoran from Brisbane. He also took all readings.

The athletes both walked and jogged across the scanner with a 4-5 step lead-in to the force plate. This was conducted in Sydney on the 18-11-2007 at City X-Ray.

The athletes are the best in Sydney and are coached by Paul Hallam.

The team was led by Dr. Paul Conneely, Mr. Alex Petsoglou (radiology expert) and Ms. Robyn Rice a podiatrist in Cammeray, Sydney.

Not only did we perform the plate testing, we also took many measurements pre and post mobilisation of the foot and ankle joint.

Currently this massive amount of data is still being collated, not only from the athletes but from a further 15 non athletes.

Hopefully all data will be ready by May 2008.

The slides are those for the athletes pre and post mobilisations. The readings are from average sub sets for all athletes. The data set is collected three times for each event. This is then averaged for the individual and then each individuals events are averaged and graphs are then produced.

The RS scanner takes reading from specific points. They are labeled M1, M2, M3, M4, M5 and T1.

M1 means the pressure under the base of MET head 1. The others follow. T1 means the average pressure under the great toe.

From the graphs there are noticeable changes in pressures between the pre and post values and between the left and right feet.

The changes between the left and right feet may be explained by the fact that these athletes had competed only a few hours earlier in the state 200m events. These results

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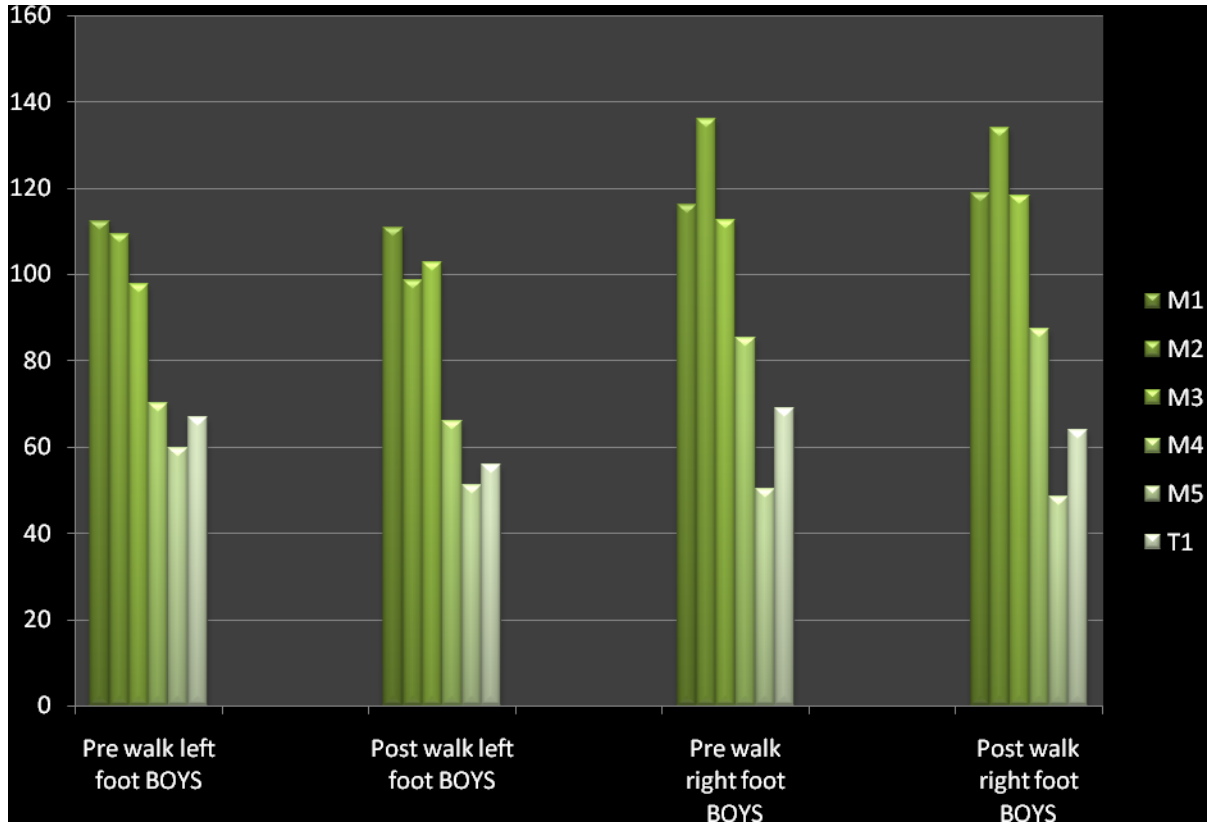
will be retested in the new year. If they are repeated then a follow up program will be implemented.

The only treatment that was conducted on the athletes was mobilisation of the foot and ankle. These mobilisations were performed by myself. All measurements pre and post mobilisations were performed by Ms. Rice.

- If you find these results interesting, please send me an email on:
musmed@musmed.com.au

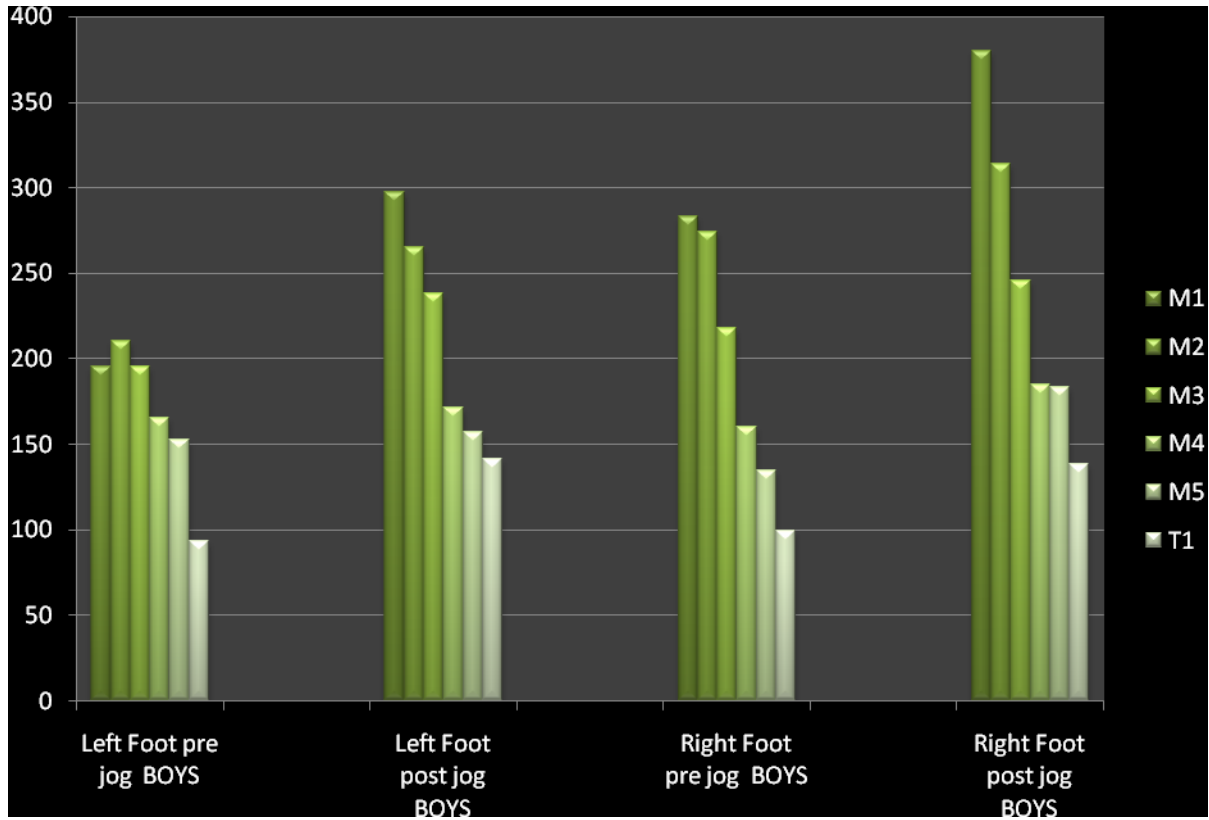
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Males. Left and right foot pressures pre & post mobilisations



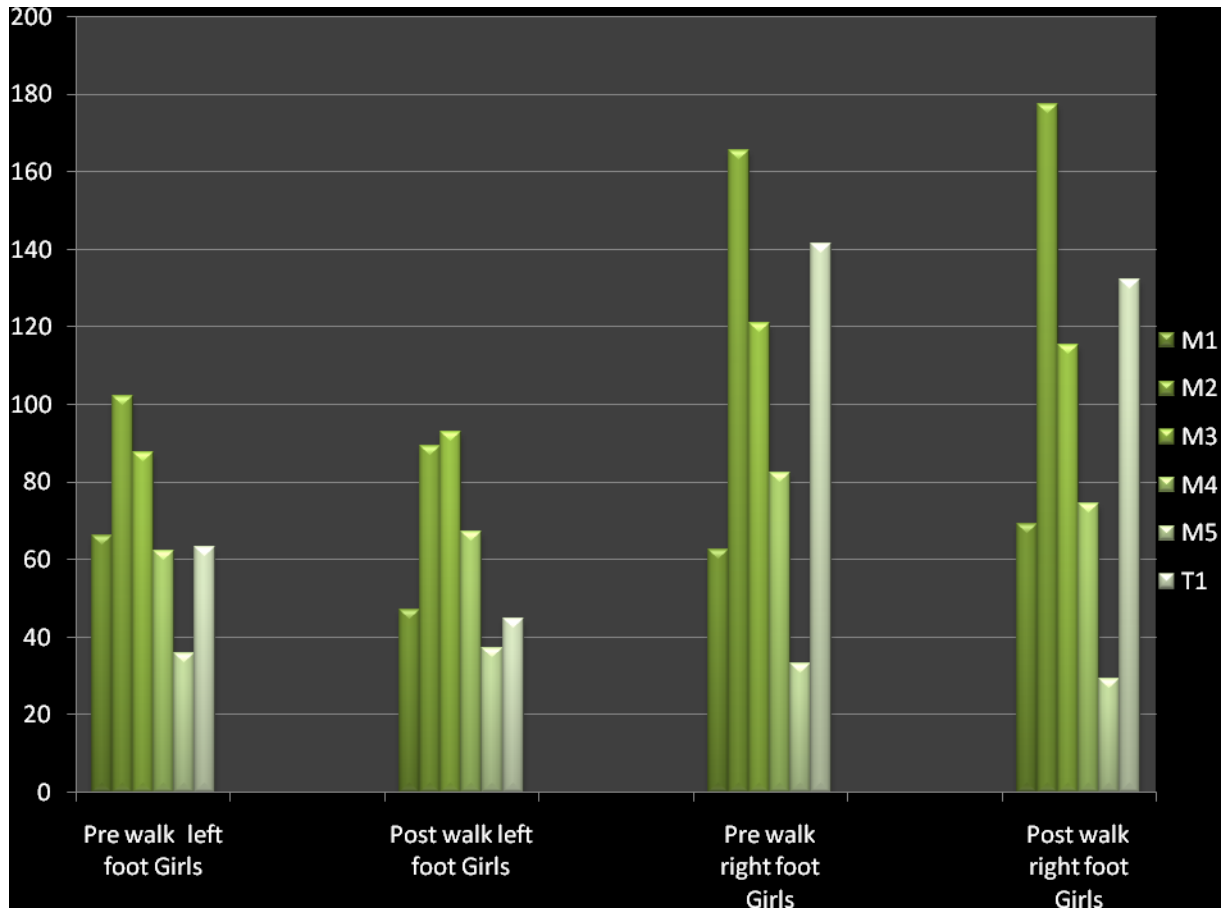
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Males. Jogging foot pressures. Pre & post mobilisations



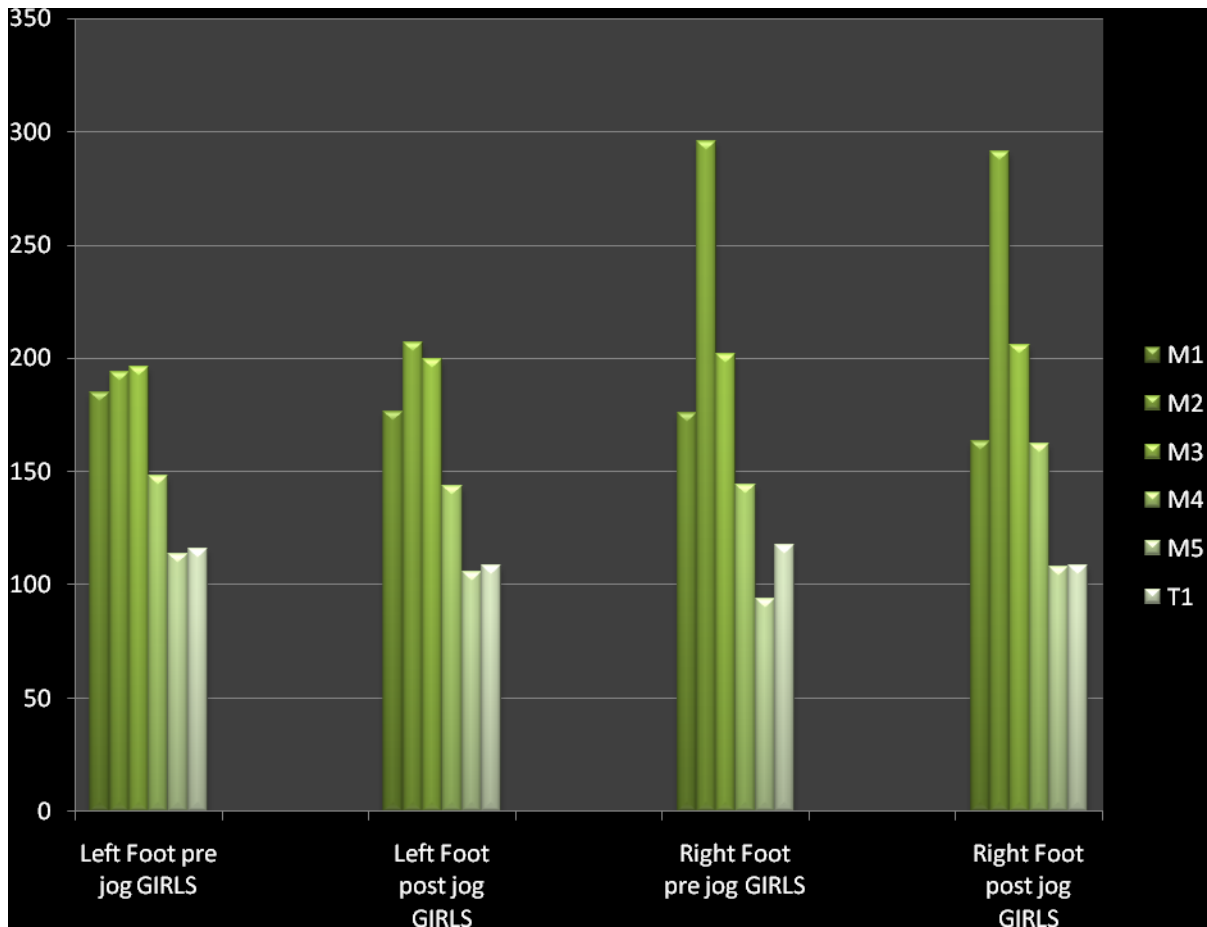
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Females. Walking. Force Plate pressures pre & post mobilisation



Comparing Foot pressure changes pre and post mobilisations

Females. Jogging. Force Plate pressures pre & post mobilisation



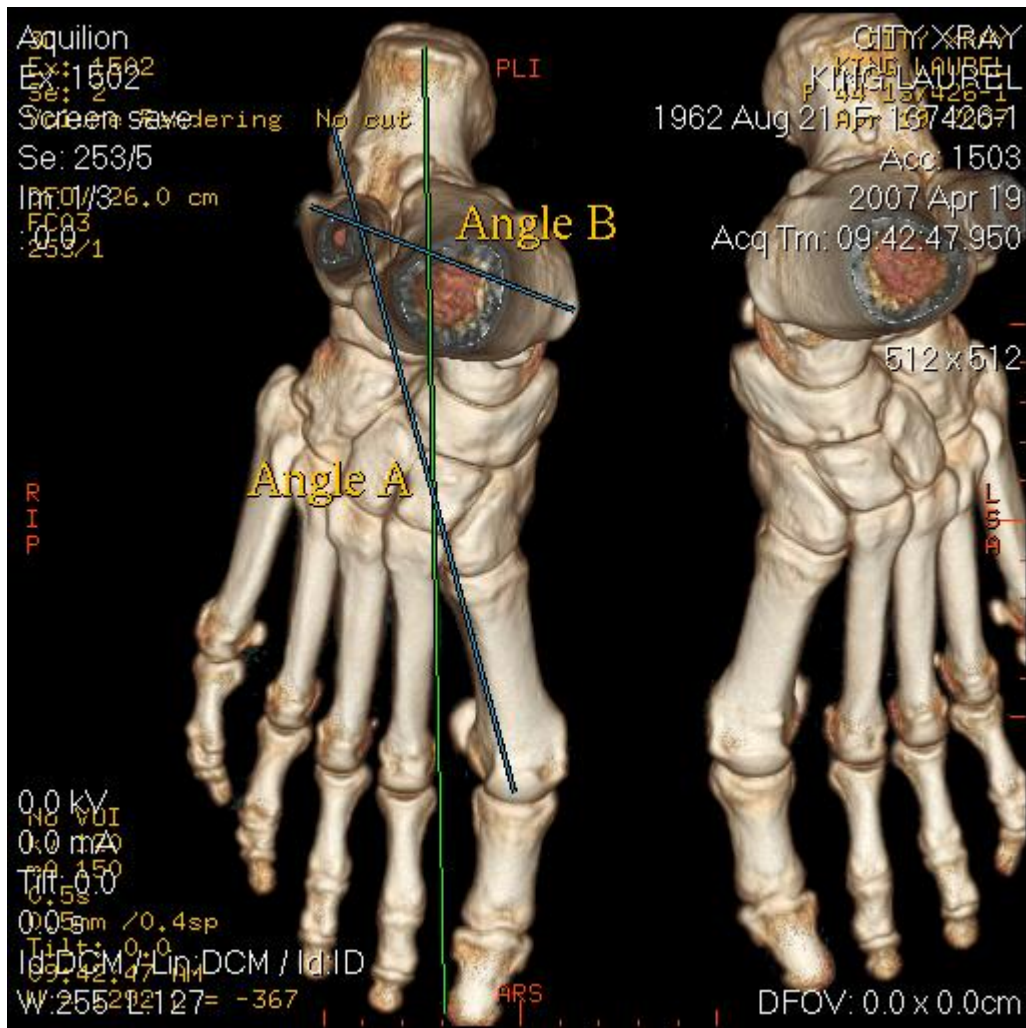
Results

- From these results one can clearly see that there are great benefits in mobilisation of the foot and ankle.
- There is an increase of 83 Newtons of force under the great toe of the males comparing pre and post jogging. Changes are seen in each graph.
- More to come in the next few weeks. Happy New year to all.

CT 3D imaging Angles of Paulex

- The Angles of Paulex are CT 3D reconstructed angle of the foot. The images are comparing the angles pre and post mobilisation of the foot and ankle.
- The exact way these angles are calculated can be found by using the left hand slider of the website www.musmed.com.au
- From the two sets of images it can be seen that mobilisations make the feet angles exact compared to pre mobilisations.
- If you are interested email me: paul@musmed.com.au
- Happy thinking

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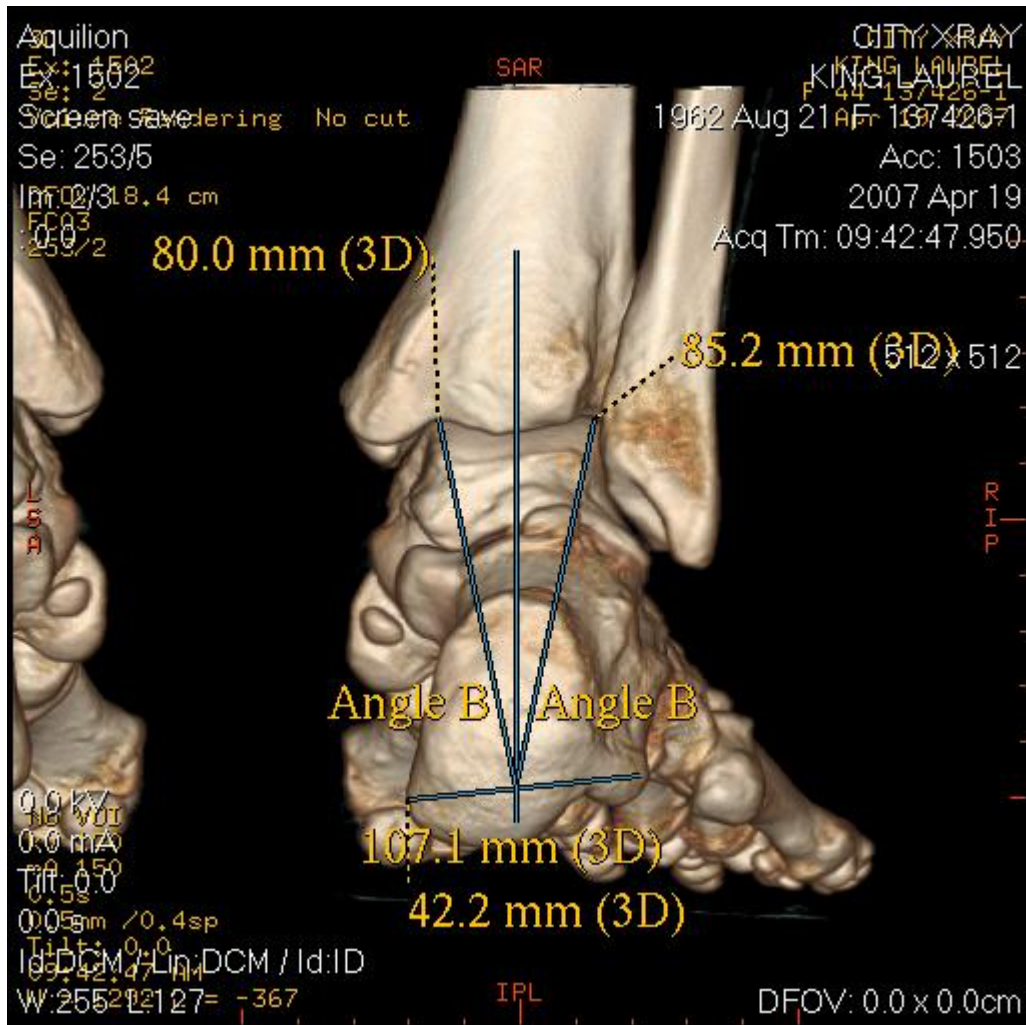


Angle A = A1 Angle Angle B = A2

The angle A is made by orientation the software to show down the shaft of the tibia. The midpoint of the calcaneus is found as well as the midpoint of the middle cuneiform bone. A line is then drawn.

Angle B is made by the midpoint of the middle cuneiform bone and the midpoint of the 1st. MET

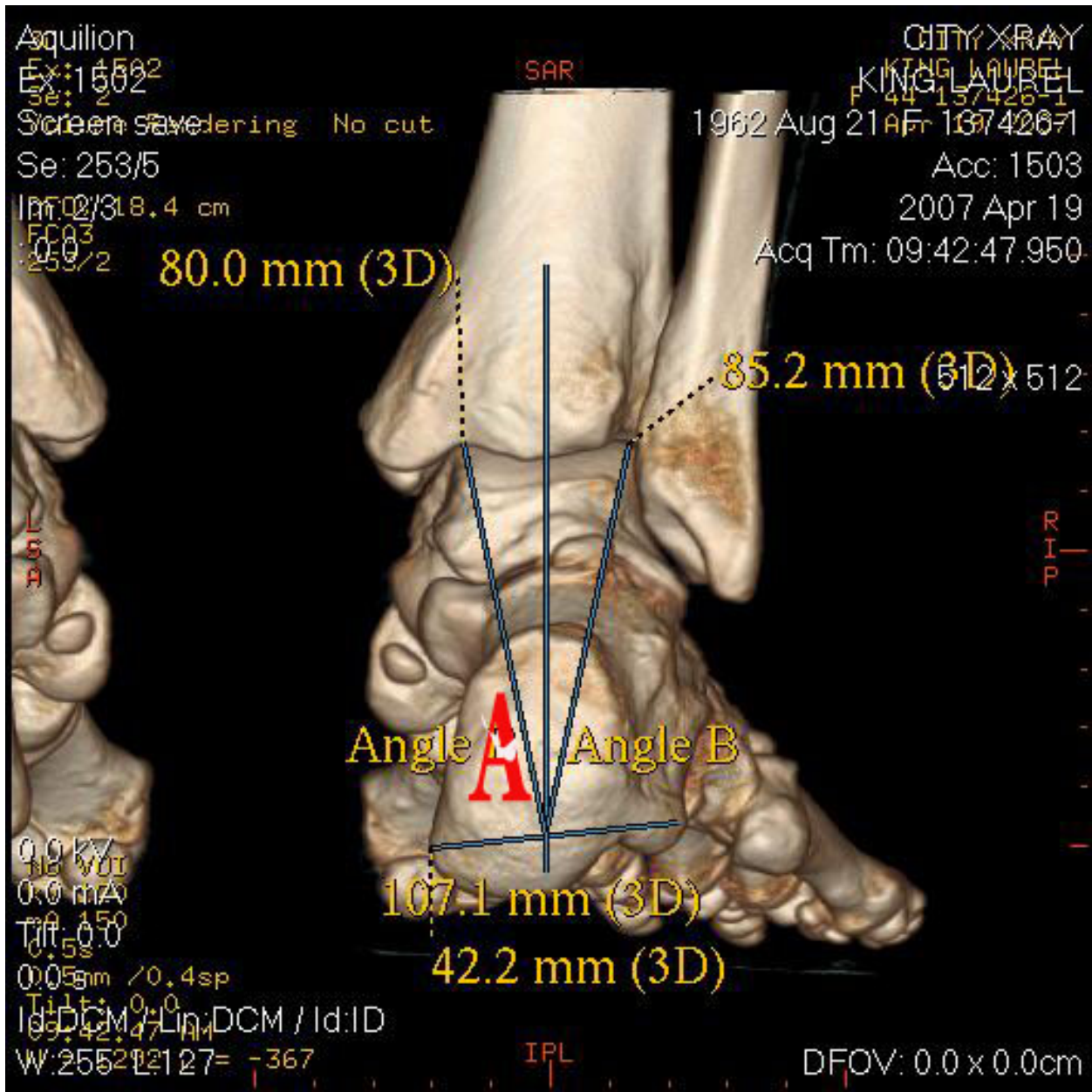
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Angle 3 is formed by halving the neutral calcaneus widest point and a vertical line is made from this point. A line is then taken from here to the most medial point seen on the talus.

Angle 4 is made by the vertical line and a line from the midpoint on the calcaneus to the most lateral view of the fibula.

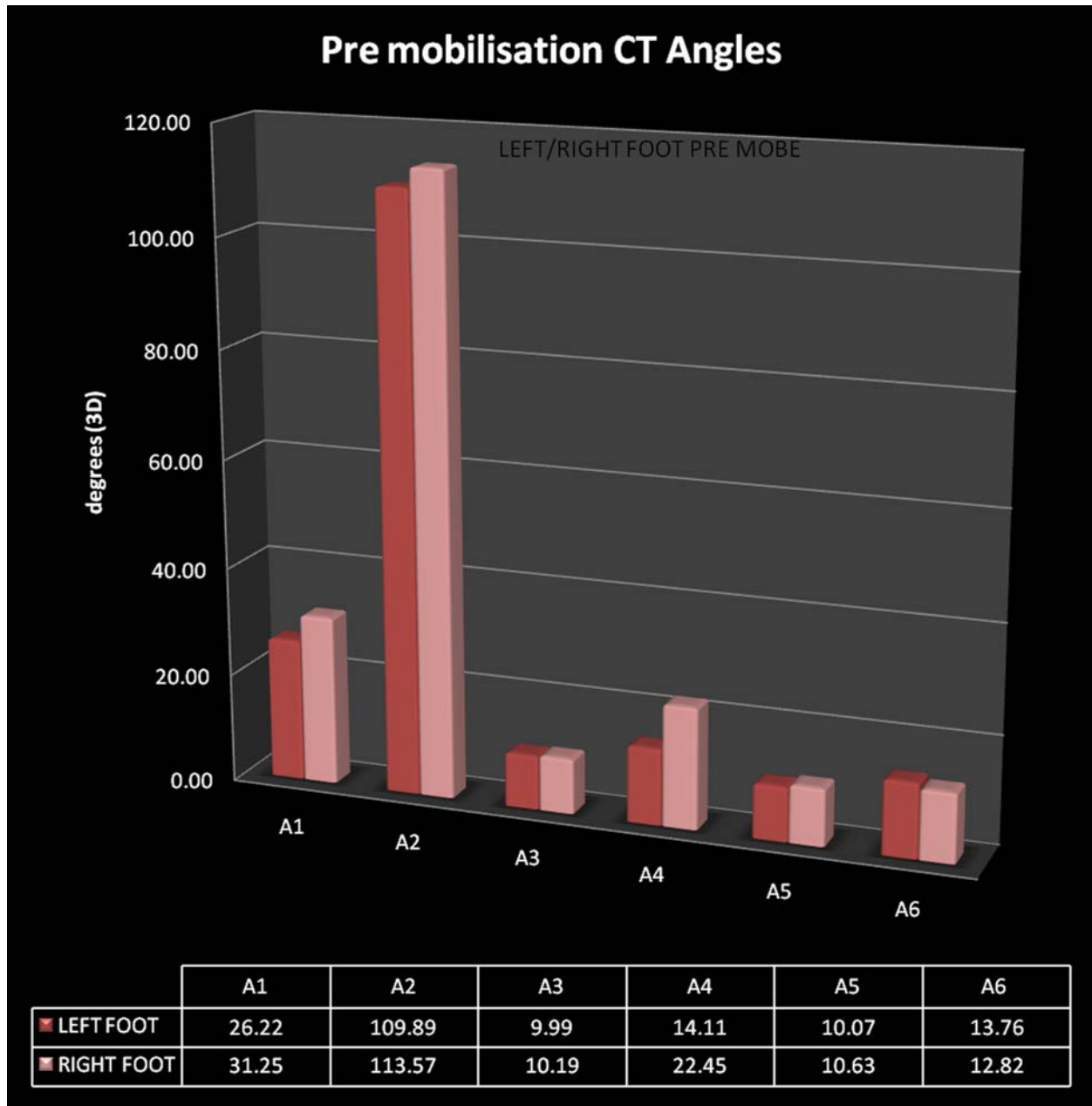
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Angle A = 5 and Angle B = 6

These angles are made in an MRI view. This is a standard view for ankle MRI's. The aim is to rotate the ankle so the widest gap is seen between the tibia and fibula.

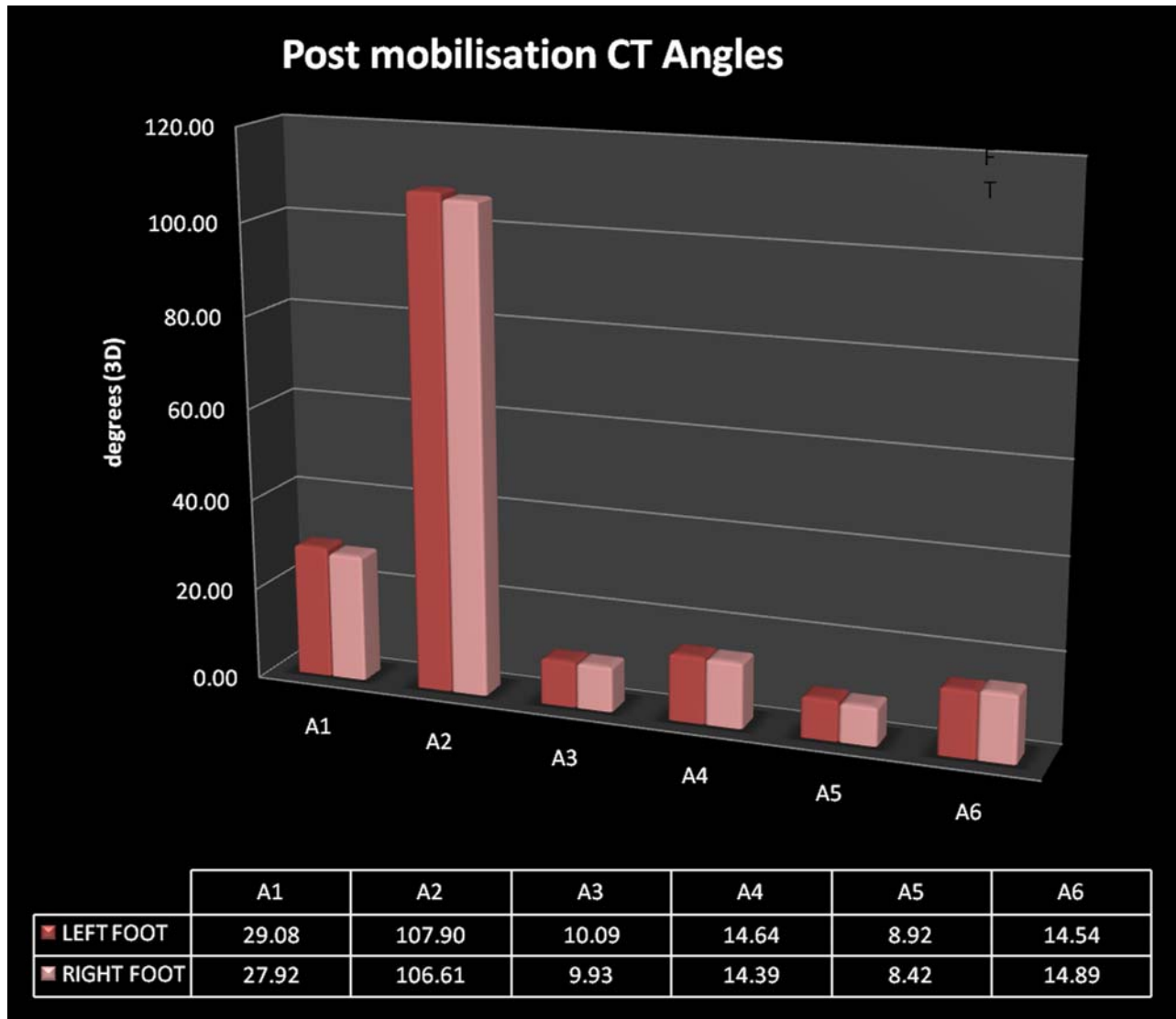
Angles of Paulex pre mobilisation



The values here are the average for the 9 people.

As more values are received, these diagrams will be updated.

Angles of Paulex Post Mobilisation



More to come

- So far this represents 9 of the 23 persons in the study. None had any major foot pathology and none had overpronated feet.
- It seems that the Angles of Paulex will have a role in standardisation of orthotics.
- When I post OP feet angles in the next few months, you will see what I am talking about.
- Happy New Year. 1-1-2008